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PTO/SB/33 (07-05)

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**PRE-APPEAL BRIEF REQUEST FOR REVIEW**

Docket Number (Optional)

107101-00052

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name \_\_\_\_\_

Application Number

10/781,680

Filed

February 20, 2004

First Named Inventor

Naoto SEN et al.

Art Unit

3618

Examiner

VANAMAN, Frank

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).

Note: No more than five (5) pages may be provided.

I am the

☐ applicant/inventor.☐ assignee of record of the entire interest.  
See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed.  
(Form PTO/SB/96)☒ attorney or agent of record.  
Registration number 47,271☐ attorney or agent acting under 37 CFR 1.34.  
Registration number if acting under 37 CFR 1.34 \_\_\_\_\_

Signature

Rhonda L. Barton

Typed or printed name

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Telephone number

February 7, 2007

Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required.  
Submit multiple forms if more than one signature is required, see below\*.

☐ \*Total of \_\_\_\_\_ forms are submitted.

This collection of information is required by 35 U.S.C. 132. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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**PATENT APPLICATION**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re the Application of:

Confirmation No.: 5545

Naoto SEN et al.

Art Unit: 3618

Application No.: 10/781,680

Examiner: Frank Vanaman

Filed: February 20, 2004

Attorney Dkt. No.: 107101-00052

For: CONTROL SYSTEM FOR CYLINDER CUT-OFF INTERNAL COMBUSTION  
ENGINE

**PRE-APPEAL BRIEF REQUEST FOR REVIEW**

**MAIL STOP AF**

Commissioner for Patents

P.O. Box 1450

Alexandria, Virginia 22313-1450

February 7, 2007

Sir:

The Applicants request review of the Office Action dated September 7, 2006 in the patent application identified above. No amendments are being filed with this Request. This Request is being filed with a Notice of Appeal.

## **REMARKS**

Claims 1, 3-12 and 14-22 are pending in the subject application. The outstanding Office Action in the present application is the second Office Action in this application. Thus, this application qualifies for Appeal.

### **Rejections Under 35 U.S.C. § 103**

Claims 1, 3, 6, 8, 9, 11, 12, 14, 17, 19, 20 and 22 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Iizuka (U.S. Patent No. 4,188,933) in view of Jindo et al. (U.S. Patent No. 6,665,603 B2, "Jindo").

Claims 1, 3, 4, 5, 7-9, 11, 12, 14-16, 18-20 and 22 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Iizuka in view of Guest (U.S. Patent No. 6,193,333 B1).

Iizuka was cited for disclosing many of the claimed elements of the invention with the exception of the deceleration determination as being associated with a speed and/or distance control device which determines a deceleration condition associated with a comparison of velocity and/or change in velocity of the vehicle with target velocity and change of velocity values, and a road gradient. Jindo and Guest were cited for curing this deficiency.

Claims 10 and 21 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Iizuka in view of Jindo and Isogai et al. (U.S. Patent No. 6,594,574 B2, "Isogai") and in view of Guest and Isogai. Iizuka and Jindo, and Iizuka and Guest were cited for disclosing many of the claimed elements of the invention with the exception of the deceleration determination as being associated with a fuel-cut control device which determines a deceleration condition. Isogai was cited for curing this deficiency.

The Applicants traverse the rejections and respectfully submit that claims 1, 3-12 and 14-22 recite subject matter that is neither disclosed nor suggested by the cited references.

As a preliminary matter, claims 1 and 12 recite "switching control of engine operation based on a load of the engine between a full-cylinder operation in which all of the cylinders are operative and a cut-off cylinder operation in which some of the

cylinders are inoperative” and that the engine operation controller or the step of engine operation control “switches engine operation to the full-cylinder operation if it is determined that deceleration is required by the step of running control when the running controller conducts at least one of the cruise control and the preceding vehicle follow-up control”. As such, the engine is operating under the cut-off cylinder operation when the running controller conducts at least one of the cruise control and the preceding vehicle follow-up control. As acknowledged in the Office Action Iizuka fails to disclose deceleration determination as being associated with a speed and/or distance control device, and thereby, fails to disclose or suggest this feature of the invention.

The Applicants respectfully submit that there is no disclosure or suggestion of a cut-off (or partial) cylinder operation during the execution of the following control in Jindo, or during the time that the electronic control unit takes active control of the vehicle’s speed in Guest. Jindo and Guest merely disclose deceleration demands in the cruise control or preceding vehicle follow-up control. As such, none of the cited references, either singly or in combination, disclose or suggest the claimed condition of the engine during cruise control and preceding follow-up control, specifically, that the cylinders are in a cut-off operation during the cruise control and preceding vehicle follow-up control, as recited in claims 1 and 12.

The Office Action asserted that it is very well known in the vehicle arts to connect added systems (such as cruise or preceding-vehicle-following controls) such that an element having a need for causing a braking condition interfaces with a braking system present in an existing vehicle. See page 6, line 26 of the Office Action dated September 7, 2006 and page 2 of the Advisory Action dated December 29, 2006. The Applicants respectfully submit, however, that whether systems can be connected, does not speak to the claimed invention, which recites the relationship between the claimed engine operation controller and running controller based on the condition of the engine during cruise control and preceding follow-up control.

The Office Action also asserted that Iizuka can retrieve braking desirability information from “sources” other than merely the depression of the brake pedal. The

Applicants respectfully submit that it would not have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify Iizuka with the cruise control or preceding vehicle follow-up control in a cut-off cylinder operation, to arrive at the claimed invention.

Iizuka merely discloses that to effect braking, the inlet and exhaust valves associated with the deactivated cylinders will be restored and that a detector or switch 4 that detects a condition where the engine braking is demanded, such as an operating condition of a foot brake pedal. See column 1, line 63-column 2, line 3 and column 2, lines 19-28 of Iizuka. The Applicants respectfully submit that it would not have been obvious to one of ordinary skill in the art to combine the following controller 4 of Jindo and control unit 22 of Guest to effect braking as Iizuka does not disclose or suggest any more than the operating condition of the foot brake pedal for deceleration. See column 2, lines 19-28 of Iizuka.

In addition, the Applicants respectfully submit that the Office Action selection of "sources" is based on the present application. It appears to the Applicants that the Office Action selected the "sources" to be the cruise control and following controller 4 of Jindo and control unit 22 of Guest. The Applicants further submit that the Office Action motivation for combining Iizuka, Jindo and Guest, was derived from the specification of the present application, because none of the references disclose or suggest cruise control and vehicle follow up control during a cut-off cylinder operation. Jindo and Guest merely disclose the relationship between the following control and the brakes of the vehicle, with no mention of the condition of the engine or engine cylinders during the following control. Accordingly, the Applicants respectfully submit that the suggestion to modify Iizuka to have a following control and to have the following control operative when selected cylinders are cut-off was found in the Applicant's disclosure which based on impermissible hindsight.

In view of the above, Applicants respectfully submit that Iizuka, Jindo and Guest, alone or in any combination thereof, fail to teach or suggest a system in which the engine operation controller switches engine operation to the full-cylinder operation if it is

determined that deceleration is required by the running controller when the running controller conducts at least one of the cruise control and the preceding vehicle follow-up control, as recited in claims 1 and 12.

Claim 10 depends from claim 1 and claim 21 depends from claim 12. The Applicants respectfully submit that Isogai fails to cure the deficiencies in the combinations of Iizuka and Jindo, and Iizuka and Guest with respect to claims 1 and 12, as Isogai also does not disclose or suggest that the cylinders are in a cut-off operation during the cruise control and preceding vehicle follow-up control.

In view of the above, the Applicants respectfully submit that the cited references do not support, and the Office Action has failed to establish, a *prima facie* case of obviousness for purposes of a rejection of claims 1 and 12 under 35 U.S.C. §103.

## **II. Conclusion**

For all of the above reasons, review of the outstanding Office Action is respectfully requested, and a favorable decision and allowance of all pending claims, are earnestly solicited.

In the event this paper is not considered to be timely filed, the Applicants respectfully petition for an appropriate extension of time. Any fees for such an extension, together with any additional fees that may be due with respect to this paper, may be charged to counsel's Deposit Account No. 01-2300, **referencing Attorney Dkt. No. 107101-00052.**

Respectfully submitted,



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